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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/644,484	08/23/2000	Edward E. Belfiglio	TSMI : 001	2274

29468 7590 08/08/2003

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EXAMINER

DEXTER, CLARK F

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 08/08/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

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Interview Summary	Application No. 09/644,484	Applicant(s) Belfiglio	
	Examiner Clark F. Dexter	Art Unit 3724	

All participants (applicant, applicant's representative, PTO personnel):

- | | |
|-----------------------------|-----------|
| (1) <u>Mr. Rick Martin</u> | (3) _____ |
| (2) <u>Mr. Clark Dexter</u> | (4) _____ |

Date of Interview Aug 7, 2003

Type: a) ☒ Telephonic b) ☐ Video Conference
 c) ☐ Personal (copy is given to 1) ☐ applicant 2) ☐ applicant's representative)
 Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No. If yes, brief description:

Claim(s) discussed: 1 and 10

Identification of prior art discussed:
Morgan, 6,202,528

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

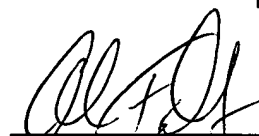
Mr. Martin briefly discussed changes to claims 1 and 10 to more clearly distinguish the claimed invention over the prior art; specifically, applicant's position is that the present invention has only a single shaft that extends from a centerpoint of the guide block. Applicant's position is that this configuration provides advantages over Morgan's device including allowing the operator to quickly and easily adjust the position of the guide block relative to the blade by rotating the shaft with respect to the mounting bracket to a desired position and then further rotating the guide block to optimize the alignment of the guide block with the blade. Mr. Dexter stated that claiming such a configuration would appear to distinguish the claimed invention over Morgan, but would likely raise new issues because it would require further consideration and/or search.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☐ It is not necessary for applicant to provide a separate record of the substance of the interview (if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached

CLARK F. DEXTER
 PRIMARY EXAMINER
 ART UNIT 3724


 Examiner's signature, if required

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Edward E. Belfiglio

SERIAL NO.: 09/644,484

FILING DATE: August 23, 2000

TITLE: IMPROVED SAW BLADE GUIDE
AND COMPONENTS THEREFOR

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Group Art Unit: 3724

Examiner: C. Dexter

Submitted For
Interview (Telephonic)
on Aug. 7, 2003
(SEE PAPER NO. 13)

RESPONSE TO OFFICE ACTION UNDER 37 C.F.R. § 1.116

Honorable Commissioner of Patent & Trademarks
Washington, D.C. 20231

Dear Sir:

In response to the Official Action dated February 11, 2003, reconsideration and withdrawal of the outstanding objections and rejections are respectfully requested. In light of the following amendments and remarks, Applicant respectfully requests reconsideration of all claims pending in the application.

IN THE CLAIMS:

Please amend claims 1, 10, 14 and 20 as follows:

1. A guide for stabilizing a saw blade, said guide comprising:

a guide block having a first surface for engaging a surface of said saw blade and a second opposing surface;

a single threaded shaft extending outwardly from a centerpoint of said second surface of said guide block, said threaded shaft having a first end rotatably engaging said guide block;

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a securing nut threadably engaging an outer threaded surface of said threaded shaft, said securing nut being rotatable with respect to said threaded shaft such that a surface of the securing nut engages the second surface of said guide block upon rotation into engagement therewith thereby rendering the threaded shaft nonrotatable in relation to the guide block.

10. A guide for stabilizing a saw blade, said guide comprising:

a base plate having a top surface and a bottom surface;

a single threaded shaft extending outwardly from a centerpoint of said top surface of said base plate, said threaded shaft having a first end rotatably engaging said base plate;

an insert disposed on said bottom surface of said base plate; and

means for selectively non-rotatably engaging the base plate and threaded shaft.

14. A unitary solid, bi-metallic block insert for a saw blade guide for stabilizing a saw blade comprising:

a first metallic material proximal to a first blade engaging surface thereof;


a second metallic material proximal to a second guide engaging surface, wherein said first metallic material is harder than said second metallic material; and

a mixture of said first metallic material and said second metallic material at a center region of said insert.

15. The insert of claim 14, wherein the first metallic material proximal to the first blade engaging surface thereof is austenitic chromium-carbide.

16. The insert of claim 15, wherein the second metallic material proximal to the second guide engaging surface thereof is carbon steel.

20. The insert of claim 17, wherein said connecting means includes one or more threaded



openings for receiving one or more corresponding threaded fasteners extending from a bottom surface of said base plate.

REMARKS

Claims 1 through 17 and 20 are pending in the application. Claims 2-6 and 13 have been withdrawn from consideration as drawn to a non-elected invention. Claims 1, 10, 14-16 and 20 have been amended.

The following issues are outstanding in the office action dated February 11, 2003:

- Claim 20 has been rejected under 35 U.S.C. Section 112 (2) as being indefinite.
- Claims 1 & 10 have been rejected under 35 U.S.C. Section 102 (e) as being clearly anticipated by Morgan (U.S. Patent No. 6,202,528).
- Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Edmisson (U.S. Patent No. 4,625,810).
- Claims 14-20 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Takahashi et al (U.S. Patent No. 4,632,074).
- Claims 14-16 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Krebsbach (U.S. Patent No. 5,993,915).
- Claims 7-9, 11 & 12 have been rejected under 35 U.S.C. Section 103 (a) as being unpatentable over Morgan in view of Robinson (U.S. Patent No 3,104,575).

Applicant hereby traverses the outstanding rejections and requests reconsideration and withdrawal thereof in light of the amendments and remarks contained herein.



REJECTION UNDER 35 U.S.C. SECTION 112 (2)

Claim 20 has been rejected under 35 U.S.C. Section 112 (2), as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. The Office Action states that the recitation of “one or more threaded openings” renders the claim vague and indefinite. The Examiner suggests changing “bi-metallic block” in line 2 of the claim to –connecting means–. Applicant has amended claim 20 accordingly, and now respectfully requests the amendment be entered and the rejection withdrawn as moot.

REJECTIONS UNDER 35 U.S.C. SECTION 102

Claims 1 & 10 have been finally rejected under 35 U.S.C. Section 102 (e) as being clearly anticipated by Morgan (U.S. Patent No. 6,202,528). The Office Action states that “Morgan discloses a guide with every structural limitation of the claimed invention”. Applicant respectfully disagrees with this assertion.

The office action attempts to construe the claim element “guide block” as including guide blocks 20, guide bracket 4, and bolt plate 7 of the Morgan device. Such an interpretation clearly goes beyond the plain meaning of the term guide block as well as how the term is used in applicant’s specification. Webster’s New World Dictionary, Third Edition defines “block” as “any large, solid piece of wood, stone, or metal often with flat surfaces”. The specification refers to a first embodiment of the invention as having a guide block 13 including a base plate 14 affixed directly to a top surface of an insert forming a unitary block which is preferably rectangular in shape. According to a second embodiment, a single piece guide block 113 is provided with a T-slot 115 for connecting the block to the shaft.

Clearly, the guide block 20 and plate 7 of Morgan do not form a “guide block” within the

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ordinary meaning of those terms and as described in the specification. The guide block 20 and plate 7 of Morgan are separated by guide bracket 4 and the plate 7 is located a distance away from the guide block 20 along the axis of the shafts 9. Accordingly, the plate 7 and guide block 20 cannot properly be considered to constitute a unitary guide “block” as claimed. As the nuts 10 engage a surface of the plate 7, and the plate 7 is not a unitary part of the guide block 20, the limitations of claims 1 and 10 are not anticipated by Morgan.

Furthermore, claims 1 and 10 have been amended to recite “a single threaded shaft extending outwardly from a centerpoint of said second surface of said guide block”. To the contrary, Morgan teaches a device having two threaded shafts extending from a surface of the guide block near each end thereof. As such, Morgan does not anticipate claims 1 & 10 as amended.

The single shaft design of the present invention allows the operator to quickly and easily adjust the position of the guide block relative to the blade by rotating the shaft with respect to the mounting bracket (specification, page 6, lines 8-21). This type of adjustment could not be done with a device having two shafts, such as the Morgan device, unless synchronous rotation of the two shafts was ensured. Furthermore, once the longitudinal position of the guide block is established with relation to the blade, the single shaft design allows the guide block to be rotated to optimize the alignment of the guide block with the blade. Where two shafts are used, as in Morgan, the guide block is rendered non-rotatable in relation to the mounting bracket once the shafts are affixed thereto.

For the foregoing reasons, the rejection of Claims 1 & 10 as being clearly anticipated by Morgan is improper and withdrawal of this rejection is respectfully requested.

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Claims 14-20 have been finally rejected under 35 U.S.C. Section 102 (b) as being anticipated by Edmisson (U.S. Patent No. 4,625,810). Claims 14-20 have further been finally rejected under 35 U.S.C. Section 102 (b) as being anticipated by Takahashi et al (U.S. Patent No. 4, 632,074). Finally, claims 14-16 have been rejected under 35 U.S.C. Section 102 (b) as being anticipated by Krebsbach (U.S. Patent No. 5, 993, 915). The Office Action states that each of Edmisson, Takahashi and Krebsbach “discloses a metallic insert (i.e., a metallic structure, e.g., 10, 36) with every structural limitation of the claimed invention.”

Claim 14 has been amended to more clearly recite the bi-metallic nature of the insert. The block insert as claimed includes “a first metallic material . . . [and] a second metallic material . . . , wherein said first metallic material is harder than said second metallic material”. Per amended claim 14, the block insert further includes “a mixture of said first metallic material and said second metallic material at a center region of said insert.” The metal used on the lower region is in direct contact with the saw blade and therefore consists of a highly abrasion resistant alloy. The upper region is designed to be softer to permit drilling for the tapped screw holes and circular recess. “The bimetallic guide insert is formed in such a way that the region near the center of the insert 24 consists of a combination of the two metals, thereby providing one unitary, solid, bimetallic insert.” (Specification, page 7, lines 18-21).

Neither Edmisson, Takahashi, nor Krebsbach disclose a device with all of the claimed structure of amended claim 14. The insert 36 of Edmisson is merely described as “a wear-resistant hard metal”, and does not disclose or suggest an insert formed from two different metal materials, nor does it disclose or suggest a center region which is a mixture of the two metals. Similarly, Takahashi teaches a wear-resistant member having a ferrous base body 12 and a

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pressurized or compressed powder body 11 mounted thereon by way of a flux layer consisting of boron or phosphorus interposed therebetween, and does not disclose or suggest a center region which is a mixture of the two metals as set forth in amended claim 14. Krebsbach teaches a method of fusing a thermal spray coating to a base material employing infrared heating, and does not disclose or suggest a center region which is a mixture of the two metals as set forth in amended claim 14. Furthermore, as discussed in the first response, Krebsbach refers to use of austenitic chromium carbide which, by definition, precludes changing the metallurgical structure by thermal treatment as is necessary to form the bi-metallic block of the insert set forth in claims 14-20. Accordingly, the Section 102 (b) rejection of claims 14-20 based on Edmisson, Takahashi and/or Krebsbach is now moot and should be withdrawn.

REJECTION UNDER 35 U.S.C. SECTION 103

Claims 7-9, 11 & 12 have been finally rejected under 35 U.S.C. Section 103 (A) as being unpatentable over Morgan in view of Robinson (U.S. Patent No. 3,104,575). As discussed in the original response, the combination of Robinson with Morgan does nothing to cure the deficiencies of Morgan with respect to independent claim 1 from which claims 7-9 depend nor does it do anything to cure the deficiencies of independent claim 10 from which claims 11 & 12 depend. Namely, Robinson does not disclose or suggest a guide for stabilizing a saw blade including a securing nut which engages a second surface of the guide block upon rotation into engagement therewith, thereby rendering the threaded shaft non-rotatable in relation to the guide block. Nor does Robinson disclose a single threaded shaft extending outwardly from a centerpoint of said second surface of said guide block as set forth in amended claims 1 and 10. Accordingly, the 103 rejection of claims 7-9 and 11 & 12 is improper and should be withdrawn.

Further, Robinson does not disclose or suggest a guide block of bi-metallic material as set forth in claims 7-9 and 11 & 12. Robinson merely discloses that the wear components can be made of hardened steel and only suggests that the wear components of that guide be formed of a single material. Robinson only suggests the use of an alternative material and does not suggest in any way formation of a guide block comprising more than one metallic material. Accordingly, the 103 rejection of claims 7-9, 11 & 12 is improper for these additional reasons and withdrawal thereof is respectfully requested.

The examiner has further taken official notice that chromium carbide including austenitic chromium carbide is old and well known in the art and has well known benefits including resistance to wear. Accordingly, the examiner has concluded that it would have been obvious to one of ordinary skill in the art to make the harden steel of chromium carbide including austenitic chromium carbide for the well known benefits including those described above. Applicant contends that in the present application, it would not have been obvious to one of ordinary skill in the art to make the saw guide inserts of chromium carbide as alleged by the examiner.

The generic term “chromium-carbide” refers to several different classes of alloys designed to survive in varying abrasive environments. Within each Class, there are application specific chemical compositions that are more or less metallurgically suitable for these abrasive environments. The range of chemical elements used in such alloys follows:

PERCENTAGE RANGES

<u>ELEMENT</u>	<u>CLASS I</u>	<u>CLASS II</u>	<u>CLASS III</u>
Carbon	2.5-7.0	2.5-12.0	2.5-12.0
Manganese	.60-5.0	.60-5.0	.60*5.0
Silicon	.25-2.5	.25-2.5	.25-2.5
Chromium	25.0-40.0	18.0-35.0	25.0-40.0
Molybdenum	-	.80-3.5	.80-3.5
Vanadium	-	.25-1.5	1.0-3.0
Boron	-	.005-2.0	.005-.75
Niobium	-	-	5.0-10.0
Tungsten	-	.25-.75	1.0-3.5

For reasons of not wanting to disclose "trade secrets" this application refers only to the generic term "bi-metallic chromium-carbide". Applicant has conducted extensive research on numerous materials attempting to develop a superior abrasion resistant material for saw guide inserts. The range of materials includes various steels: carbon, alloy, stainless tool steels, high speed tool steels, Nickel and Cobalt based high temperature alloys and cast irons and alloys of cast iron. Applicant has researched and used Copper based alloys including aluminum bronze (Belfiglio P.N. 6,412,380), Plastics, Phenolics and Tungsten Carbide. Tests on various grades of steel, chromium-carbide and Tungsten Carbide were conducted using the test method described in ASTM G65-85, Schedule A.

This research led to development of a specific chemical composition of chromium-carbide found among one of the three classes listed above that has never been used, prior to my research, for saw guide inserts. To applicant's knowledge he is the only one using chromium-carbide for saw guide inserts. Hence, it is not "obvious to one having ordinary skill in the art to make the hardened steel of chromium-carbide, including austenitic chromium-carbide for the well known benefits including those described above."

SUMMARY

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Applicant submits that this application is in condition for allowance and early notice of same is earnestly solicited.

Should the Examiner have any questions, comments or suggestions, he is invited to contact applicant's representative at the telephone number indicated below.

Respectfully submitted,

Date: May __, 2002

By: _____
C. Richard Martin
Registration No. 37,080

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

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Claims 1, and 20 have been amended as follows:

1. A guide for stabilizing a saw blade, said guide comprising:

a guide block having a first surface for engaging a surface of said saw blade and a second opposing surface;

a single threaded shaft extending outwardly from a centerpoint of said second surface of said guide block, said threaded shaft having a first end rotatably engaging said guide block;

a securing nut threadably engaging an outer threaded surface of said threaded shaft, said securing nut being rotatable with respect to said threaded shaft such that a surface of the securing nut engages the second surface of said guide block upon rotation into engagement therewith thereby rendering the threaded shaft nonrotatable in relation to the guide block.
10. A guide for stabilizing a saw blade, said guide comprising:

a base plate having a top surface and a bottom surface;

a single threaded shaft extending outwardly from a centerpoint of said top surface of said base plate, said threaded shaft having a first end rotatably engaging said base plate;

an insert disposed on said bottom surface of said base plate; and

means for selectively non-rotatably engaging the base plate and threaded shaft.
14. A unitary solid, bi-metallic block ~~metallic~~ insert for a saw blade guide for stabilizing a saw blade, ~~said insert~~ comprising:

a first ~~bi-metallic block wherein the metallic material of said bi-metallic block~~ proximal to a first blade engaging surface thereof;

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a second ~~is harder than~~ the metallic material proximal to a second guide engaging surface,
wherein said first metallic material is harder than said second metallic material; and
a mixture of said first metallic material and said second metallic material at a center
region of said insert.

15. The insert of claim 14, wherein the first metallic material proximal to the first blade engaging surface thereof is austenitic chromium-carbide.

16. The insert of claim 15, wherein the ~~bi-metallic~~ second metallic material proximal to the second guide engaging surface thereof is carbon steel.

20. The insert of claim 17, wherein said connecting means ~~bi-metallic block~~ includes one or more threaded openings for receiving one or more corresponding threaded fasteners extending from a bottom surface of said base plate.